



SFUND RECORDS CTR
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MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Manager (TOM) RF
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager 
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
Technical Direction Form No.: 00105077 Amendment 3

DATE: September 17, 2007

SUBJECT: Review of Analytical Data, **Tier 2**

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC LA02
CERCLIS ID NO.:	CAD042245001
Case No.:	36520
SDG No.:	Y3CJ1 and Y3CL1
Laboratory:	Shealy Environmental Services, Inc. (SHEALY)
Analysis:	Semivolatiles Selective Ion Monitoring (SIM)
Samples:	22 Ground Water Samples (see Case Summary)
Collection Date:	July 9 through 13 and 16, 2007
Reviewer:	Santiago Lee, ESAT/Laboratory Data Consultants

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc: Cynthia Gurley, CLP PO USEPA Region 4
Steve Remaley, CLP PO USEPA Region 9

CLP PO: ☒ Attention ☐ Action

SAMPLING ISSUES: ☒ Yes ☐ No

00105077-8345/36520/Y3CJ1+L1-PAS

Data Validation Report – Tier 2

Case No.: 36520
SDG No.: Y3CJ1 and Y3CL1
Site: Omega Chem OU2
Laboratory: Shealy Environmental Services, Inc.
Reviewer: Santiago Lee, ESAT/LDC
Date: September 17, 2007

I. CASE SUMMARY

Sample Information

Samples: (SDG Y3CJ1) Y3CJ1 through Y3CJ5, Y3CJ7 through Y3CK0, Y3CK2 through Y3CK5, and Y3CK7 through Y3CL0
(SDG Y3CL1) Y3CL1, Y3CL3, Y3CL7, Y3CL9, and Y3CM0
Concentration and Matrix: Low Concentration Water
Analysis: Semivolatiles SIM
SOW: SOM01.1 and Modification Reference No. 1363.2
Collection Date: July 9 through 13 and 16, 2007
Sample Receipt Date: July 10 through 14 and 17, 2007
Extraction Date: (SDG Y3CJ1) July 11, 12, and 17, 2007
(SDG Y3CL1) July 17, 2007
Analysis Date: (SDG Y3CJ1) July 14, 22 and 23, 2007
(SDG Y3CL1) July 22 and 23, 2007

Field QC

Field Blanks (FB): Not Provided
Equipment Blanks (EB): Not Provided
Trip Blank (TB): Not Provided
Background Samples (BG): Not Provided
Field Duplicates (D1): Y3CJ4 and Y3CJ5
Field Duplicates (D2): Y3CK9 and Y3CL0

Laboratory QC

Method Blanks & Associated Samples:

SBLK04: Y3CJ1 through Y2CJ5
SBLK61: Y3CJ7 through Y3CK0, Y3CK2 through Y3CK5, Y3CK2MS, Y3CK2MSD
SBLK59: Y3CK7 through Y3CL1, Y3CL3, Y3CL7, Y3CL9, Y3CM0

Tables

1B: Data Qualifier Definitions for Organic Data Review
2: Calibration Summary

CLP PO Action

None.

CLP PO Attention

Results for pentachlorophenol in all samples are qualified as estimated (J) due to low relative response factors (RRFs) in initial and continuing calibrations (see Comment A).

Sampling Issues

The sampler signature is missing on the traffic report & chain of custody record (TR/COC) for samples collected on 07/16/07 (see attached TR/COC, p. 7 in Y3CL1 data package).

Additional Comments

As directed by the TOM, a Tier 2 review (i.e., verify EXES R-flags, except where alternate non-rejected data exist. Where R-flags are removed, perform Tier 1A forms review and apply appropriate qualifiers) was performed. A Table 1A is not requested. Nondetected results for pentachlorophenol were R-flagged by EXES because RRFs in initial and continuing calibrations were below 0.05. A Tier 1A forms review was performed for pentachlorophenol only. The EXES R-flags were removed since RRFs were above 0.01 (in accordance with ESAT Region 9 Standard Operating Procedure 901) and appropriate qualifiers were applied (see Comment A).

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services Volatile and Semivolatile Data Packages*;
- USEPA Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration, SOM01.1, May 2005; and
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, January 2005.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	<u>Parameter</u>	<u>Acceptable</u>	<u>Comment</u>
1.	Holding Time/Preservation	N/A	
2.	GC/MS Tune/GC Performance	N/A	
3.	Initial Calibration	No	A
4.	Continuing Calibration	No	A
5.	Laboratory Blanks	N/A	
6.	Field Blanks	N/A	
7.	Deuterated Monitoring Compounds	Yes	
8.	Matrix Spike/Matrix Spike Duplicates	No	B

9.	Laboratory Control Samples/Duplicates	N/A
10.	Internal Standards	Yes
11.	Compound Identification	N/A
12.	Compound Quantitation	N/A
13.	System Performance	N/A
14.	Field Duplicate Sample Analysis	N/A

N/A = Not Applicable

III. VALIDITY AND COMMENTS

- A. Results for the following analyte are qualified as estimated due to low RRFs in initial and continuing calibrations and should be flagged "J".

- Pentachlorophenol in all samples and all method blanks

RRFs between 0.05 and 0.01 were reported for pentachlorophenol in initial and continuing calibrations (see Table 2). Since results are nondetected, false negatives may exist.

The RRF evaluates instrument sensitivity and is used in the quantitation of target analytes.

- B. Matrix spike/matrix spike duplicate recoveries for pentachlorophenol in QC samples Y3CK2MS and Y3CK2MSD did not meet the criteria for accuracy specified in the SOW, as shown below.

	Y3CK2MS	Y3CK2MSD	QC limits
<u>Analyte</u>	<u>% Recovery</u>	<u>% Recovery</u>	<u>% Recovery</u>
Pentachlorophenol	133	130	9-103

Results reported may indicate poor laboratory technique or matrix effects which may interfere with analysis. Detected results for pentachlorophenol may be biased high.

Matrix spike sample analysis provides information about the effect of the sample matrix on sample preparation and measurement.

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," January 2005.

- U The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Table 2
Calibration Summary

Case No.: 36520
SDG No.: Y3CJ1 and Y3CL1
Site: Omega Chem OU2
Laboratory: Shealy Environmental Services, Inc.
Reviewer: Santiago Lee, ESAT/LDC
Date: September 17, 2007

RELATIVE RESPONSE FACTORS

	<u>RRF</u>	<u>RRF</u>	<u>RRF</u>
Analysis date:	07/14/07	07/14/07	07/14/07
Analysis time:	10:16-	12:38	21:07
GC/MS I.D.:	MSD4	MSD4	MSD4
<u>Analyte</u>	<u>Init.</u>	<u>Cont.</u>	<u>Cont.</u>
Pentachlorophenol	0.0387	0.0405	0.0405

	<u>RRF</u>	<u>RRF</u>	<u>RRF</u>	<u>RRF</u>	<u>RRF</u>
Analysis date:	07/22/07	07/22/07	07/22/07	07/23/07	07/23/07
Analysis time:	10:47-	15:30	21:10	10:43	12:46
GC/MS I.D.:	MSD4	MSD4	MSD4	MSD4	MSD4
<u>Analyte</u>	<u>Init.</u>	<u>Cont.</u>	<u>Cont.</u>	<u>Cont.</u>	<u>Cont.</u>
Pentachlorophenol	0.0342	0.0299	0.0329	0.0334	0.0349